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SCIENTIFIC BACKGROUND

Mead's Cereal was introduced in 1930, and Pablum in 1932, by Mead Johnson & Company. Since then, the growing literature indicates early recognition and continued acceptance of these products and the important pioneer principles they represent.

THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

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MENTAL HEALTH IN THE SPECIAL CLASSES*

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Talks and articles on mental health and the all-round personality growth of the school child tend to be inspirational, exhortatory, and vague. It may be in part because of my training as a physician and psychiatrist that I visualize any health program as seeking out first the causes of ill health and eliminating *them* before going on to provide a regimen that will make a normal degree of health *even better*. Possibly that is why it seems so fruitless to me to hear teachers' groups devoting hours of discussion to such questions as, "How can we measure the emotional and social growth of our pupils?" or "How does the curriculum of my grade promote the physical, mental, moral, emotional, and social growth of the children?" These are, to be sure, excellent questions and very important, but there simply are not any answers to them yet. Our knowledge about growth is too scanty and the things we *can* measure, such as physical size and mental age, we do not seem to be able to influence much. Objectives of mental health will be approximated more nearly if we pay attention to what have already been proved to be health hazards to school children, than if we waste effort on obscure and ill-defined problems.

What, then, are the hazards to mental health that exist in the special classes for retarded children? I can name four that have come to my attention in studying the personality breakdowns in children.

First there is the stigmatization that arises from the acknowledged and verified fact of intellectual weakness in the child. I say acknowledged and verified because complete segregation of a subnormal group has the effect of calling attention to the retardation. I used to think I was pretty clever at diagnosing deficiency on ordi-

*The accompanying article has been condensed from a paper read by the author before the last New York meeting of the Department of Special Education of the National Education Association. Reprinted by permission from Journal of Exceptional Children, November, 1941, page 42.

nary life situation contact, but after we had a maid in our home for three months who later, I learned, had an IQ of 65 without my suspecting less than 85 or 90, my self-confidence dropped. Even in the classroom it appears to be very difficult, with few exceptions, to say who belongs in the class for retarded children and who does not. However, to place a child in complete segregation does stigmatize and verify the lack of mental ability and this acts as a mental hazard in many ways with which the reader is well familiar.

The second hazard I should mention is the practice of selecting children for retarded classes only after they have had long repeated failures both in daily work and at the time of promotion. One state tests children for admission to special classes only when they are three years retarded in grade placement. To force a child to fail of promotion on three or six times, in addition to the daily humiliations in work that is too difficult, is a most glaring violation of mental health principles. There is no better way for the school to promote delinquency than through such negligence and mistaken judgment. Such experiences as this before referral into a special class make a doubly difficult and sometimes impossible task for the teacher of retarded children in her effort to educate. The natural interests and inclinations of the child have been so warped away from anything that can happen in a classroom that it is impossible to interest him and no more is accomplished than force can achieve. Here again such dire effects as I have been dwelling on do not become apparent in all children any more than do all children exposed to tuberculosis sicken and die. All we know about personality development, however, points clearly to the unwisdom, from the mental health point of view, of procrastinating in placing children into their proper group in school organization.

The third hazard I wish to mention is that arising out of distinguishing marks that are applied only to children in retarded classes. In many school systems they are given no grade classification. It proves to be an embarrassing and hence sore point with them that they have no legitimate answer when a stranger or acquaintance asks them what grade they are in. This lack of a recognized academic status has the effect of depriving them of the protective coloring they would have if they were in the regular grades, and also makes it appear to their none-too-gifted parents that they are making no progress in school because they are not promoted. How many times have you heard, "They don't learn 'em nothin' in them special classes?" What is the effect of this attitude on the pupil's receptivity to the education that is offered him?

Another distinguishing mark is found in the tendency to use a different kind of report card in the classes for retarded children. In some instances no report card at all is sent home. This offers a fertile subject for teasing and tantalizing by brothers or sisters that have *escaped* the retarded class by however narrow margin, and serves to make the pupil dissatisfied with his school placement —hence unhappy and inefficient. Parents of this group usually do not like it either. Many of the departments for special education that use their own report card forms feel that they have commendably advanced in that particular. I do not wish to appear to defend the report cards that are used in most of our school systems today. From a mental health point of view, they are indefensibly crude, but I do present that the class for the retarded child is not the proper place for innovations of this nature. There is need here for sufficient protective coloring to prevent the retarded child from being more readily distinguishable as defective than he will be after leaving school.

Sometimes distinguishing characteristics arise from the different names used to designate subject matter divisions, from the size of the child in comparison to the rest of the school population, and from the old state-institution loom in the special classroom, and so on *ad infinitum*. Whatever serves to point out these children as different, in respect to a desirable quantity of intelligence, serves to jeopardize or diminish their chances for mental health. The tendency we find everywhere for people to cover up distinguishing marks that are considered undesirable is no more evidence of weakness. It is a pattern made necessary for most of us by factors arising out of group living arrangements.

The fourth mental health hazard I have noted in connection with special classes for the retarded is the traumatic way in which children are introduced into the class. How many times a day does it happen in this country that some child is told he is not smart enough to be in the regular grades and must go into an ungraded or special room. It is implied or actually stated in many instances that the child is not worthy of a place with normal children. Special class is presented to the child and his parent as a convenience to the school and not as an opportunity for the child. He must go into special class because he is not good enough for the regular grades. With this type of presentation, why should not parents and child feel humiliated, persecuted, unappreciated, and resentful? A definite and powerful force has been applied thereby to break down the child's mental health. It is utterly needless that

such a presentation should be made. There is much less justification for it than that the child be deliberately exposed to measles.

All of these hazardous conditions I have mentioned have an insidious, delayed, and nonspecific effect on the personality. Before they result in actual recognizable loss of mental health they must work in co-operation with other unhealthful experiences that the child has had. However, unlike so many physical diseases, where you either have it or you do not, mental diseases are largely quantitative. It is a question of what assets and liabilities there are in the personality, how much efficiency the individual can muster for a task and how much satisfaction he can get from life in a way consistent with the satisfaction of others. These are the telling points in mental health and are not so dramatically related to the causes as, for example, the outbreak of the rash five days after a child has been in contact with a scarlet fever case.

What can be done to avoid or diminish the stigmatization that is verified and pointed out boldly by complete segregation? I think, if we can agree that the principle of segregation is bad, and yet recognize that the variety of educational experience offered in the regular grades is too limited for the extremes in variation in children, we will find ourselves forced to some form of compromise. In the first place, isolation of retarded classes can be modified by calling them by the same name as the other special classes. I understand that parents and children have very little or no resistance to transfer to Public School 500 in Manhattan since it is a special school for both the exceptionally bright and the exceptionally dull. If the term *special* or some other nondescript name is given all classes that vary from the usual pattern, some feeling of segregation can be avoided.

Next, isolation can be diminished if the special class children attend school in the same building that the other children use and are scheduled to take whatever subjects they can with the regular group. Such things as music, art, gymnasium, manual training, activity programs of various types, sewing, cooking, trips, class plays, and the like lend themselves particularly to such transfers. The temporary overloading of the regular classroom should be compensated for by sending regular class pupils with coaching problems into the special class. The children in the regular grades need the special tutoring and the children in the special class need the freedom from isolation. Teachers may not like to have children coming in and leaving the classroom at all times of the day, but this is a program for better pupil mental health and you can

not better anything without changing something, even though the change may be difficult.

Special class children will be less segregated if their classroom is developed partially into a center for remedial work. With the special background in psychology that most teachers of subnormal children have it should not be difficult for them to add, to their professional equipment, techniques in remedial reading and diagnostic studies of arithmetic failures.

Special classes should, of course, be found in all junior and senior high schools so that children beyond the elementary-school age will not have to remain behind. This simple change has many far-reaching effects in the promotion of mental health and educational goals, and would be relatively easy to work out in school administration.

So much for compromises to cut down isolation. Now, our next point was that the methods of selecting children for special classes are faulty. I think we all can agree that the earlier a child is recognized as needing special instruction in school work the better it will be for him. To accomplish early recognition I should recommend that all children be given Stanford-Binet Individual Mental Tests before, or at, entrance to the first grade. For the selection of the extremes in intelligence at the age of five or six, group tests are too unreliable. They are more suitable for ages 10 to 12, but still not as good as individual tests. There are two ways of accomplishing the individual testing of all children at the beginning of school. One is to employ a psychometrician for each 1200 admissions to your first grade each year. The other is to employ a competent clinical psychologist to train each kindergarten or first grade teacher to administer the test to her own pupils. Given sufficient and close training and supervision the testing by *selected* teachers is as accurate as the testing by a trained psychologist—as the findings in Minneapolis show after three years of such a program.

Universal testing not only helps in selection of special class candidates but also picks out those that are probably not yet ready to start reading, helps to locate those from whom superior work should be expected, and so forth. Consequently, mental health is promoted in a variety of ways by such a program.

The individual intelligence test results will provide a sufficiently reliable basis for strongly suspecting the need for special class placement in some children. These children can then be tried out in regular school work. If a child fails the practical test as well

as the Binet test, then he should be considered a candidate for special class and given the physical and social investigations that might bring to light factors, simulating mental retardation, that may be remedied or in which another form of treatment is indicated.

Some children will be so clearly inadequate both in the test and in their kindergarten performance that a trial in the regular curriculum is not necessary. The simple addition of social and physical investigations mark them as needing special class instruction. These young children, then, six or seven or perhaps at the most eight years of age, are already tried, tested, and investigated, and found in need of special class work. Where there is a special class within walking distance, or where transportation is available, the transfer can be made immediately. There is nothing to be gained by waiting, and much to be lost.

The third mental health hazard that I have noted in special classes is that distinctive features tend to prejudice parents and children against the good work that is being done there. The distinctive feature is usually assumed to be a further mark of inferiority even though it may be a real educational advance. To avoid this it seems to me necessary to give children in special classes regular class ratings according to chronological age. Thus a 9 year old might be in regular grades in 4A-1,4A-2, 4A-3, or 4A-4, but in the special class he should be in 4A-S or 4A-5. Also report cards similar to those used in the rest of the school are best, in my opinion, for special class children, even though they do not allow as satisfactory reporting as the newer forms might allow. Children should be graded according to the success they have in working up to their own ability. If these practices lead to misunderstanding on the part of the parents, simply explain what you are doing and why. It is not a comparative way of working, and the reasons for avoiding comparisons and competition should be explained to the parent.

This brings me to the discussion of my fourth and last point —the improvement in the ways children are introduced to special classes. The highest goal would be to get the child into the class without force and with an understanding and acceptance by the parent of his need for the special work. If the parents can not understand and accept the need, then it is *still* wise to place the child in the class provided they have no real resistance to the idea. However, I do not think it is well for the mental health of the child, unless exceptional conditions prevail, to force him into the special class against the parents' will.

My idea of an interview with a parent concerning placement of his child in a special class is that it should be an educational experience for the parent. It should win the parents' co-operation in the venture and help him to see more clearly the limitations and assets of the child and his individual needs. In discussing this interview with you it is useless, I believe, to stay on general principles. Let me give you something a little less restricted than the report of an actual interview but something nearly as specific.

When it has been decided that the child should go into the special class, the person that is to talk to the parent about it should ask the parent to come to the school office at a definite time. One-half hour should be set aside so that other things will not interfere. The interview should be controlled by a specific purpose to be achieved, and the parent should be brought back to the subject as quickly as possible if conversation goes into foreign fields. The interviewer should begin with some justifiable praise of the child to eliminate the defensive attitude the parent is likely to have, but then go on rather quickly to state that you are concerned with the propriety of the education his child is getting and wonder whether you can give him some help. Ask immediately, before you are drawn to make specific complaints about the child, if the parent has been satisfied with school progress. Get all the complaints and explanations that the parent will give on this point and fix in your memory the things you can use or agree with later on. Ply the parent with specific questions about learning in infancy and early childhood—age of talking, walking, bowel and bladder control, and the like. If possible get the parent to express the idea that the child is slow in developing. To get this, you might have to ask how this child compares in learning with his siblings if that will bring the statement of recognition of slowness that you want. The point here is that you are on much better terms with a parent if he has told you that his child is slow than if you have told him.

If the parent sees no failings in the child, point out what you have noticed and question what this means as to future educational requirements. If the parent still refuses to see the child's failings, praise the child where justified and terminate the interview by expressing the hope that the child will progress faster so he will not need to fall behind the friends in his own grade. Let the parent know that you are concerned to see that every child gets the best education your school can give. Your willingness to let the parent go without raising the subject of special class placement (because you do not have the parent's complaints to base it on) will make

future dealings easier with the parent and will help to build up his confidence in you. The job the school is called upon to do at this point is to make sure that the parent better realizes the extent to which the child is failing. The child's work may be sent home, preferably by mail, and the parent should be invited to see the child in class. The thing that most parents lack is sufficient opportunity for comparing their dull child with others of his own age.

When the parent has been able to express some recognition of the child's retardation, accept any explanation he may wish to give to save face, and agree with his observations about the child's specialized needs. If the parent should ask at any time whether you consider the child feeble-minded or subnormal, do not answer in the affirmative, because these terms may mean something much more serious to the parent than they mean to you. Answer such a question by restating the complaints of the parent that come nearest to describing the child as he really is.

Ask the parent at this point what he would like to have you do for the child to help him. The parent may say that the child would be all right if the teacher spent more time with him. The answer to that is that her class is large and the time she can give him, therefore, limited. Point out that a smaller class would meet this need. The parent should be encouraged to go on to say what the child needs because he will generally request just the things a special class has to offer. When the parent has said all he can on this point the time for the *clincher* has come and you can reply to this effect "I think I know what you mean. I agree with you. He should be in a smaller class where he can get the individual attention that he needs. We have such a class taught by Miss Jones. We have given her a small load so that she can devote more time to individual pupils. There does not happen to be a place in that class right now—so many more children need it than we have room for—but as soon as there is I shall put your boy right in. We should have more of these special classes but they are so expensive. It costs us two or three times as much to educate a child there as in the larger class. They are really more like private schools in many respects. Of course, we shall want to keep him with his own classmates for as many subjects as he can profitably take with them." During this talk you should rise and walk toward the door, as your purpose has been accomplished. Better let the parent think over what has been said and come back without an appointment if more is to be discussed. Close the interview by inviting him to visit the special class and to call on you again at any time if questions arise in his or the mother's mind.

The principles involved in this interview are that you have lead the parent to see and express the need for special education and you have allowed him to say what circumstances in school will provide the best opportunity for his child. This is education for him and better results may be expected from the child than if parents are antagonistic to something they do not understand. Nothing was said during the interview about the mental test. Apparent reliance on these results is a very weak position to take in an interview of this sort. Most parents do not have the confidence in the results of intelligence tests that school people have, and it is best to leave that subject out of the consideration. The question of what can be expected of the child in later years is too difficult to answer and should be left for time to determine. If the present situation is being cared for properly, there is nothing to be gained by blasting what hopes the parent may cling to for the future. The best way to convince parents of the limitations of their children is to let them work out the plan for his improvement. If that plan does not work out as they had expected they will be convinced of the limitations in time. Most people can not be convinced by argument or logic of something they do not want and are not ready to hear.

The opportunity for promoting mental health in the special classes is greater than in any other place in the school system. When teachers of regular grades are approached with suggestions as to what they may do to attain mental health goals, they are likely to say "But I can not do that with 40 or 50 children in the room." The special classes do not have so many children. Teachers there need not feel pushed by over-reaching and impossible goals. If your child can not be prepared for a high school diploma or college degree or even a job in competition with the more capable, you can try to help him be a better W. P. A. worker than we now have. Failing that, you may try to keep him from getting into jail or a mental hospital. He may be a little better prepared for parenthood than his parents were. Modest goals like these are possible for teachers in special classes—character goals. You will find more time for these positive aspects when you are relieved of the necessity of doing a remedial job of nourishing the child's self-estimate back to a normal level after the buffeting he has been taking during several years of regular class work.

Children in special classes tend to come from the homes that are most impoverished in all senses of the word. As long as this is so, the school has an exceedingly important role.

HEALTH IN THE ONE-ROOM SCHOOL*

ABBIE M. BUCK, *Director*
Child Health Education Service
Maine Public Health Association

Health education has given too little thought to the one-room school, considering that it still serves three and a half million children in the United States. It serves over eighty thousand children in the New England area. The 1939 report from the Statistical Department of the United States Office of Education gave the number as 130,210, with an average enrollment of 27 pupils, a total of 3,515,670 children now attending one-room rural schools.

South Dakota has the largest percentage of one-room schools of any of the states, 88% of all of the schools being of this type. Illinois, Iowa, Missouri, New York and Pennsylvania each have between 10,000 and 15,000 one-rooms schools.[1]

In the New England States there are approximately 3,000 one-room rural schools. Maine and Vermont have the largest number, with 1,382 in Maine and 1,000 in Vermont, or 60% one-room schools in each state. In New Hampshire approximately 50% of the schools are one-room, while in Massachusetts 12%, in Rhode Island 12% and in Connecticut 20% are one-room schools.[1]

New England's One-Room Schools

While the one-room rural schools in the New England States are much the same, some have better trained and better paid teachers, a longer school year and more supervision than others. In some of the states a definite plan has been adopted for improving the one-room school, while in others emphasis has been placed on consolidation.

Physical Plant

All of the New England States now have certain definite standards that must be met when new one-room school buildings are constructed. The standards are usually set up by the State Department of Education or the State Department of Health.

The sign "Standard School" or "Superior School" on school buildings in Vermont means that the school has met the offiicial rating of 150 credits or 170 credits respectively. Since 1935 Ver-

*The study reported here was made possible through a health education scholarship in Health Education at the Massachusetts Institute of Technology awarded by the Charles H. Hood Educational Trust and by the cordial cooperation of State Departments of Education and State Departments of Health in the New England States.

mont has been providing state aid for any school wishing to become a Standard School. There is no aid for carrying the school from Standard to Superior.[2]

New Hampshire has a plan for the standardization of its schools. This plan also requires schools to be suitable and sanitary, well-equipped, taught by an approved teacher, directed by an approved superintendent with a minimum year of 36 weeks and with suitable provision for the care of the health and physical welfare of all of its pupils.[3]

During the fall of 1939 visits were made to the 132 one-room rural schools in the six New England States. Five of the schools were a part of city systems and located on the outskirts of the city. The population of the towns in which the 132 schools are located ranges from 69 in a plantation to 29,000 in a city, and the enrollment in the various schools from 6 pupils to 47 pupils.

A TABULATION OF SCHOOL HOUSEKEEPING CONDITIONS
NEW ENGLAND ONE-ROOM SCHOOLS

	No.	%
Number of schools visited	132	100
A. LIGHTING		
Number of schools with lighting from left or left and rear	110	83.3
Number of schools with cross lighting	22	16.6
Number of schools with electric lights	97	73.4
Number of windows in each room	6-12	
Number of schools with window shades	101	76.5
Number of schools with double shades hung in center of window	48	36.3
Number of schools with screens	9	6.8
Number of schools with window ventilators or boards	15	11.3
B. HEATING		
Number of schools with a furnace	48	36.3
Number of schools with jacketed stoves	44	33.3
Number of schools with stoves without jackets	36	27.2
Number of schools with heatrolas	4	3.03
Number of schools with a thermometer	58	43.9
Number of schools in which temperature was read and ventilation adjusted daily	15	11.3
C. SEATING		
Number of schools with single seats and desks	79	59.9
Number of schools with double seats and desks	53	40.1
Number of schools with seats that were movable	65	49.2
D. CONDITION OF ROOM		
	No.	%
Number of schools with oiled floors	132	100
Number of schools that were orderly	92	69.6
Number of schools that were not orderly	40	30.4
Number of schools that were attractive	60	45.4
E. COATROOMS		
Number of schools with hooks for wraps in entry or cloakroom	121	91.6
Number of schools with provision for hanging wraps in room in cold weather	13	9.9

F. HANDWASHING FACILITIES

Number of schools with both hot and cold water	14	10.6
Number of schools with running water and wash bowls	14	10.6
Number of schools with sinks and wash basins	59	44.6
Number of schools with wash basins (using table or desk)	35	26.5
Number of schools without any handwashing facilities	24	18.1
Number of schools using liquid soap	46	34.8
Number of schools using soap powder	30	22.7
Number of schools using common bar soap	32	24.2
Number of schools with no soap	24	18.1
Number of schools that had teakettles	35	26.5
Number of schools that had mirrors	24	18.1
Number of schools that had paper towels	90	68.4
Number of schools that had towels brought from home	18	13.6
Number of schools that had no towels	24	18.1

Water for the 118 schools with no running water is brought from well nearby—Wells with pumps were found in 10 school yards.

F. DRINKING FACILITIES

	No.	%
Number of schools with bubblers	14	10.6
Number of schools with water cooler and faucet	64	48.4
Number of schools with water pails (10 had no covers)	39	29.5
Number of schools with no drinking facilities	15	11.3
Number of schools with paper cups	46	34.8
Number of schools with glass or tin cups	57	43.1
Number of schools with no cups	15	11.3

It is difficult to find a satisfactory place in the schoolroom for keeping tin or glass cups away from flies or dust.

H. TOILET FACILITIES

Separate toilets for boys and girls are connected with the schoolroom by a ventilated passageway, the only entrance being through the schoolroom	37	28.1
Separate toilets for boys and girls located 20 feet from the school building	66	50
Number of schools with flush toilets	14	10.6
Number of schools with chemical toilets	15	11.3
Number of schools with dirt toilets	103	78.0
Number of toilets that were clean and supplied with paper	120	90.9
Number of teachers reporting handwashing facilities for use after toilet	35	26.5

I. SCHOOL LUNCH

Number of schools in which some children eat the noon lunch at school	128	96.9

(Number in each school who stay is from 6 to 45).

	No.	%
Number of schools that serve a hot dish during cold months	60	45.4
Number of schools with a shelf or cupboard for lunch boxes	28	21.2
Number of schools in which children wash before lunch	60	45.4
Number of schools in which more than 50% pupils bring milk with noon lunch	54	40.9
Number of schools in which more than 50% pupils have milk with midmorning lunch	18	13.6
Number of schools with scales	22	16.6

Essentials for the hot lunch are provided by the town, the Parent-Teacher Association, Red Cross or other local organizations and through the use of surplus commodities. The Parent-Teacher Association, Red Cross and other local organizations also help to pay for dental and other corrections for needy children. Another type of service available to the rural school and community is the 4H Club and the Farm Bureau.

Supervision

In Connecticut any town employing 25 teachers or fewer, on application to the State Board of Education, may have assigned to its schools a trained supervisor in addition to the superintendent. At present there are only six small districts that do not have this service. Vermont has two elementary supervisors, one assigned to the northern part of the state and one to the southern. New Hampshire has one elementary school agent, Maine has three field agents for rural education, Massachusetts has recently appointed an elementary supervisor, and Rhode Island, because of its small number of one-room rural schools (45), has no elementary supervisor.

Health and Physical Education

Connecticut has a Senior Supervisor in Health, Physical Education, and Safety Education, and an Assistant in Health and Physical Education, Vermont has a Supervisor of Health and Physical Education, New Hampshire has a Supervisor of Health, Massachusetts has a Supervisor of Physical Education and a Co-ordinator in Health Education, Maine has a Director of Physical Education.

In all of the states some schools are better supplied with playground equipment than others. All but a few of the schools visited had balls and some also had teeters, swings, slides, and rings and other play equipment. In all of the states some emphasis is placed on organized and supervised play.

Medical, Nursing, and Dental Services

School health services for rural schools vary in extent in different states and in different areas in the same state. The availability of nursing service in rural schools varies from a minimum of 45% to practically 100% in the different New England States. Correspondingly from 15% to 50% of these schools have medical service. Five of the States have advisory dental service, and are carrying on an educational program for the correction of dental defects. Some of the states have arranged traveling dental clinics available for rural schools under specified conditions of financial co-operation.

While it is against the law in Massachusetts for the School Department to finance any kind of medical treatment,[4] the Vermont Legislature provided in 1935 that "the board of school directors may expend not more than 3% of a year's budget for the improvement of the physical effiiciency of school children of indigent parents, including the purchase of milk and other ingredients for hot lunches, also expenditures for glasses, dental service, removal

of tonsils, when such expenditures are approved by the town health officer, teacher or public health nurse."[5]

One-Room Schools of Tomorrow

What can the one-room school do in the promotion of its own pupil health? There will certainly be further improvement in health education. Some teachers already have excellent programs. Our field study has made it clear that more health training in our Teachers' Colleges will prove to be of tremendous value in providing teachers who can contribute to pupil health. The provision of scales for monthly weighing is a vital aid in interesting children in their growth and thus in habits of food and rest. The program of big muscle activity will also improve with better teacher training.

We may also expect further important improvement in the school lunch,—both the mid-morning and the noon lunch. A larger percentage of children are having a mid-morning milk lunch at school in the cities than in the country. A hot lunch in winter will help to eliminate malnutrition.

A line of improvement which is both important and readily possible is the improvement in the healthfulness and attractiveness of the schoolroom. Children who are housed in a room which they themselves help to make convenient and attractive will be influenced to make improvements in their homes where it is needed.

A definite plan for improving the condition of the schoolroom and surroundings would help to interest the community in a better school. Such a project directed by the teacher and participated in by the pupils is a practical unit of teaching that carries over to the home. The expense of such an activity is not great. The necessary funds can be earned by the school or furnished by the Parent-Teacher Association or other local organization.

Some of the health accomplishments actually secured by teachers and pupils are listed below. In one school they papered the school house, whitened the ceiling, shellaced and varnished the desks. They got a new water pail and washed it daily. They got a mustard jar and made a soap dish out of it by cutting holes in the cap. They got a new wash dish and kept it clean. Each pupil brought his own cup and towel. They raised money and bought a new water cooler. They secured a mirror and hung it where all could see. At noon, pupils took turns in seeing that desks were cleaned inside and out. They washed the windows once a month and inspected the toilets once a day. They have a window box and two new swings.

Other schools have hired a carpenter to make playground

equipment, to put a pole in the dressing room upon which clothing can be hung, purchased window ventilators, a white sink, a tea kettle, and a wash basin; built a dust free cupboard for glasses, put hooks for towels beside the sink, and warmed school lunches at school. The schools have raised the limited but necessary funds.

There are difficulties in developing a satisfactory health program in the one-room school, but our visits show that most of these difficulties can be overcome by a teacher with initiative, resourcefulness, and health awareness.

Included in the rural schools visited was a one-room school in a town of 197 inhabitants. Through the efforts of the pupils and under the leadership of the teacher the school was well equipped, clean, orderly, and attractive. What was accomplished in this school is being duplicated in other communities, even though a large percentage of the families are in a low income group.

REFERENCES

1. W. H. Gaumnitz, Senior Specialist in Rural Education Problems, United States Office of Education, "Are the One-Teacher Schools Passing?"
2. Official Rating Sheet, Vermont Rural Schools.
3. Report of the State Board of Education New Hampshire—1939.
4. "General Laws—School Hygiene State of Massachusetts."
5. "Suggested Course of Study in Health Education," Vermont.

* * * * *

Cost of Education in 42 States.—The period from 1930 to 1940 was one of expansion in state activity and state spending. Friends of public education began to ask: "Did education as a function of state government hold its own, or lose ground in relation to other state function?"

The expenditures of 42 states and Hawaii were studied. At the end of the decade all but three state governments were spending larger amounts for elementary and secondary schools than they had been spending in 1930. But the expenditures for schools by 24 state governments constituted a smaller proportion of total state expenditures at the end than at the beginning of the decade.

The people of the United States are estimated to have spent over 7½ billion dollars in 1938 for the consumption of certain goods and services frequently designated as "luxuries" or "non-essentials". This amount is far in excess of expenditures for public education; in most states the total cost of the state government was less than the private expenditures for luxuries. The Journal of the National Education Association, September, 1941, p. 172. Abstracted by Rose J. Jirinec, M.D.

CHILDREN'S DENTISTRY A PRACTICAL PROGRAM MOST HEALTH OFFICERS CAN HAVE*

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Dental disease is a public health problem. Its incidence, particularly among children, is recognized by everyone. "If dental caries were a malignant disease terminating in the death of the individual, practically the entire population of the civilized world would be wiped out within the span of a single decade. All who would remain would be about five per cent of civilized mankind who seemingly are immune to the disease, and the inhabitants of certain uncivilized countries who are notably free from it." (1)

Dental examinations made in New York City show that 90 to 97 per cent of children are subject to this disease. (2)

"The Hygiene of the School Child," states that: "Of . . . twenty-five million school children, . . . 50% have enough defective teeth to interfere seriously with (their) health." (3)

The experience of the Children's Fund of Michigan, which has made dental programs a major part of its Child Health Service for the past ten years, indicates that 83% of over a half million rural and urban children examined during that period, required dental treatment, exclusive of orthodontia. Dental caries is acknowledged to be the Universal Disease, one which does not immediately kill but one which does cripple and incapacitate large numbers of people.

Fifty years ago such statements would have carried little significance, for the practice of dentistry was then considered to be a highly specialized form of mechanical art confined almost exclusively to adult patients.

Today all infected areas in and about the teeth are looked upon as potential foci of general infection by which other organs of the body may be affected.

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*Read Before the Third Session of the Health Officers' Section of the 69th Annual Meeting of the American Public Health Association, Atlantic City, October 11, 1940. Condensed by Lon W. Morrey, D.D.S.

1. Bunting, Russell W. The Prevention of Dental Caries. A paper read before the Detroit District Dental Society. December 1936.
2. The Committee on Community Dental Service, New York Tuberculosis and Health Association. Health Dentistry for the Community. Page 6. The University of Chicago Press, Chicago.
3. Terman, L. M. and Almack, J. C. The Hygiene of the School Child. Page 9. Houghton Mifflin Company, 1929.

E. C. Rosenow, M.D., ([4]) states: "The tendency to systematic invasion in acute infections about the teeth and jaw is recognized by all" and "A careful study of the clinical and experimental data now available seems to show conclusively that a sane and comprehensive effort toward the prevention and cure of septic foci in the dental and other areas will result in the alleviation of human suffering, in a better preservation of the tissues in old age, in longer duration of life, in increased mental and physical efficiency, in the prevention and cure of acute and chronic disease, and, through the laws of heredity, make for a sturdier race."

Those who have endeavored to improve childhood dental health have depended upon a two-phase program: an educational phase to refer children to private dentists, and a corrective phase in which it has been assumed that private dentists would give adequate care to the children so referred. This is an idealistic kind of program, that does not and cannot work for the majority of children.

That it does not work is well known to all who make hundreds of dental inspections annually. The same conditions of dental neglect—for the majority of children—persist from year to year.

Williams and Shaw ([5]) state: "Health service in the schools is the organized procedure for inspecting and examining children to determine their condition and to provide those corrective or remedial measures that may be required. The inspection and examination are for the purpose of determining the health status, and are of very little value unless defects and disturbances of health are brought under competent medical or dental attention. The notion that the school should determine the defect but that the parent should be responsible for its correction has led to a great deal of examining but to very little correction."

Terman and Almack concur: "The amount of medical and dental treatment received by children, in proportion to that which is needed, is about as inadequate as their education would be if there were no public schools."

That educational programs, including the reference of children to private dentists, the fee to be paid by the parent, cannot work for a majority of children is readily recognized when we remember that a majority of parents earn but a subsistence living in which the provision of the essential wants—food, shelter, and clothing—

4. Rosenow, E. C. Studies on Elective Localization: Focal Infection with Special Reference to Oral Sepsis. J. Natl. Dent. Assoc. 6; pp. 983-1029. November, 1929.

5. Williams, J. F. and Shaw, F. B. Methods and Materials of Health Education. Page 136. Thomas Nelson and Sons, 1935.

depletes the family budget. Adequate health service, of which dental service is a part, is financially beyond the reach of the majority of our population.

The speaker advocates finding a practical way of preventing dental caries short of operative means and providing dental service for unable-to-pay children. If research did, or has discovered the etiology of dental caries, effective preventive measures probably would have to be instituted very early in life. Thus the present generation of children would necessarily have dental caries unless operative measures were employed. Certainly present day theories as to the etiology of dental caries and programs of prevention founded thereon have not appreciably reduced childhood dental infection as a public health problem.

We have then today but one practical sure method for the control of dental infection. It is not dental health education. It is an operative program which includes the dental examination of children and the prevention and correction of dental defects through early and continuous dental service. But you say, "This is an expensive proposition. It costs more than we can afford."

In the past, many operative programs have been prohibitively expensive. Particularly so when the program depended upon referring children to private offices for treatment. Our experience demonstrates that no private office can hope to produce the same kind of dentistry procurable in clinic practice at comparable expense.

Over the past ten years, the Children's Fund has developed a type of clinic program which is relatively inexpensive, one which insures good supervised services, one which gets needed things done in large volume at reasonable cost. It is called a Summer Dental Program, since it is conducted for a period of 12 weeks during each summer period, in addition to our full year dental programs. It is reported in the Journal of the American Dental Association for September, 1936. ([6]) Most health officers could have such a program. The essentials are:

1. An interested, co-operative, responsible Dental Program Committee of lay people, including thereon school authorities and members of the dental profession, well chairmaned by a Superintendent of Schools or a key public-health minded lay person.
2. A dental equipment of portable description which need not cost over $750.00 and which can be stored and used from year to year.

6. Gibson, K. R. Can Rural Dental Service Be Given at Reasonable Cost? J. A. D. A. 23; pp. 1774-82. September, 1936.

TABLE I—COST ANALYSIS OF THE 1939 SUMMER DENTAL PROGRAM

Children's Fund of Michigan Cost on the Basis of a 12 Week, 17 County Program, Employing 17 Operating Dentists and One Supervising Dentist

Salaries			$ 8,650.00
Staff:			
17 Dentists @ $450.00 for the 12 week period		$ 7,650.00	
1 Supervising Dentist @ $1,000.00 for the 12 week period		1,000.00	
Other Expenses			6,314.46
Dental Supplies and Dental Equipment, Repairs, and Replacements		4,360.82	
Printing (Forms)		196.25	
Telephone and Telegraph		3.41	
Postage		13.26	
Freight and Express, 17 units to and from job		212.68	
Laundry		93.60	
Auto Mileage		1,114.44	
Supervising Dentist, 5000 miles @ 6c per mile	$300.00		
Maintenance, Supervising Dentist, 90 days @ $4.50 per day	405.00		
To get 17 Dentists to and from job, including meals and hotel expense	409.44		
Estimated Stenographic and Director's Time		320.00	
Total Cost			$14,964.46
Average Cost Per County Unit			$ 880.26

* * * * *

TABLE II—REPORT OF SERVICES, SHOWING THE AVERAGE COST PER VISIT AND PER SERVICE FOR THE 1939 SUMMER DENTAL PROGRAM

Total Visits, Clinic Patients			16,221
First visits		13,064	
Subsequent visits		3,157	
Total Services Given			52,322
Prophylaxis		1,126	
Extractions, total		19,519	
Deciduous teeth	15,626		
Permanent teeth	3,893		
*Local anesthetic		14,304	
Pulp cappings		1,524	
Cement bases		14,499	
Fillings, total		15,096	
Silver amalgam	14,481		
Cement	18		
Synthetic porcelain	597		
Treatments for Gingivitis		79	
Treatments for Vincent's Infection		29	
Miscellaneous operations		450	
*Cases completed in clinic		205	
Total Cost of Program			$14,964.46
Average Cost per Visit			.92
Average number of Services per Visit	3.2		
Average Cost per Service			.29

*Not included as a Service given.

3. A dentist who is preferably an immediate graduate, recommendation of whom can be secured by writing the Dean of your own or neighboring Dental School. Many young graduates are and would be interested in such 12 week period internships.
4. A sum of money which need not exceed $650.00 to cover the salary of the dentist and other incidental expenses the first year.

The Dental Committee is most important. It should be made up of persons who will accept responsibility, who have some leisure time, and it should be small in number. It may include a county commissioner of schools, a progressive superintendent of schools, a judge of probate, the chairman of the County Board of Supervisors, a Parent-Teacher Association president, secretary, or influential members, the president of a men's service club, a leading dentist, banker, clergyman, etc.

To the Dental Program Committee is delegated the responsibility of providing a full-time dental assistant, suitable clinic quarters in a school building to carry on the work, transportation of equipment between clinic locations if more than one location is necessary, determination of eligibility of children for dental care, distribution of parent consent and appointment notices, and any necessary transportation of children from distant homes to clinic locations. The important job of supervision of the dental clinic may be a joint responsibility of the dental member or members of the Dental Program Committee and the health officer.

What can you expect of such a program? What are its costs and accomplishments? (See tables I and II, page 125)

* * * * *

Defects Discovered in Examination of Youths.—The health units of the National Youth Administration for New York City and Long Island examined 13,297 young men and women during the eleven month period ended July 31, according to a recent report. The defects and diseases most frequently found were dental defects in 92.6 per cent, visual defects in 40 per cent, malnutrition in 14.3 per cent and cutaneous lesions in 11.5 per cent. Diseases of the nose and throat occurred in 8.5 per cent, heart disease in 5.5 per cent, and high blood pressure in 4 per cent. Those who showed need for remedial treatment were referred to private physicians, private dentists, or hospital and dental clinics, if they could not afford private care. The Journal of the American Medical Association, September 13, 1941, p. 946.

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EDITORIALS

Immediately below we publish, as an editorial, some paragraphs written by Professor George T. Stafford. As Director of the Department of Corrective and Remedial Physical Education at the University of Illinois, Professor Stafford was author of "Preventive and Corrective Physical Education," a widely used text. C. H. K.

* * * * *

Fitness for War,—Let us remove our rose-colored glasses and face the facts. The people of this country, outside of our athletic group, lack the essential qualities of robustness, courage, endurance, physical and emotional stamina, and the general ability to use their bodies skillfully. They do not possess that standard of fitness, that degree of health which is characterized by strength, endurance, agility, stamina, courage, and other qualities of manhood so necessary for carrying out the activities of modern warfare. They are not capable of marching long distances with heavy packs, living out-of-doors under adverse weather conditions, driving fast-moving tanks over rough terrain, piloting the modern air or sea crafts. These activities require huge expenditures of *sustained* muscular and nervous effort.

Unfortunately, in the light of the present emergency, our fine "peace-time" sports and recreation programs have not conditioned us for the strain and stress of modern warfare. We have followed the trend toward easier, lighter forms of sports; we have not played our sports vigorously; too many have drifted into the

bleachers and have taken their sports vicariously. It is time that we took stock of our physical education programs—or rather that we surveyed our outcomes.

The selectees of today need more muscular development above the hips and including the abdominal muscles. Activities which necessitate the individual lifting his body weight, such as rope climbing and work on horizontal ladders, are needed to develop the arm and shoulder muscles. Perhaps, in our enthusiasm for game activities, we have been too hasty in pushing aside the horizontal bar, the side horse, and the parallel bars. Skill in the use of the body is seen in the performances of our gymnasts and the products of the Turnverein. Abstracted from "Something Old Has Been Added,"—by George T. Stafford, Professor of Physical Education, University of Illinois, in the *Journal of Physical Health and Education*, February, 1942, p. 79.

* * * * *

Regularly each month there comes to our desk a small (20 page) Journal published by the Los Angeles City Schools. This "Health Education" is interesting. It is interesting because it is alive. It presents matters of varied content, relating to all areas of the school health program.

Not the least of the reasons it stimulates interest is probably because the contributions are written by practical workers in the schools. A recent issue carried a message from the Superintendent of Schools, Vierling Kersey; had an article by C. Morley Sellery, M.D., Director of the Health Service Section; one from C. H. Rothe of the California Dairy Council; and another from John L. C. Coffin, M.D.

This Journal is a "publication of the Health Service Section of the Los Angeles City Schools". It is in itself a "health service" to the schools of the City and to the community at large. It is worthy of emulation. C. H. K.

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ABSTRACTS

Hearing Impairment from the Viewpoint of the Otologist,—In order to understand the types of hearing defects it is essential to discuss the normal ear and how it functions. The anatomy of the ear is best understood if we arbitrarily divide the ear into three parts: the external ear, the middle ear, and the inner ear.

The external ear consists of the auricle and the external canal which collect the sound waves and direct them to the drum membrane. The drum forms the lower outer wall of the middle ear,

which contains three tiny ossicles. The stapes is the most important bone of the three, because its footplate moves in an oval window that leads to the inner ear.

From the front of the middle ear, the eustachian tube leads down to the throat and to the back of the nose. This tube ventilates the middle ear and keeps the air pressure on both sides of the drum equal. High in the back part of the middle ear is an opening into the labyrinth of the air-containing mastoid cells.

The third part of the ear is the inner ear. The cochlea, the hearing part of the inner ear, contains fluid and has delicate hair-like receptors. Each tiny hair suspended in the fluid picks up certain tones and sends its stimulations along the auditory nerve to the brain.

There are two main types of deafness: conduction deafness and nerve or perception deafness. A very common type of conduction deafness is caused by ear wax or cerumen. In children a foreign body such as a pebble, bead or bean may also result in impairment of the conductive mechanisms. Any object in the ear should be removed by the physician.

The next most common type of conduction deafness is called, "catarrhal deafness". It commonly occurs during an acute cold or sore throat, or after an airplane ride, where a sudden change in atmospheric pressure is not compensated by adequate ventilation of the ear. The lack of proper ventilation results in absorption of the residual air by the mucous membrane with the development of a vacuum which draws fluid into the middle ear cavity. It is not too late at this stage of the process to restore normal hearing, if the conditions causing the blocked eustachian tube are corrected. This may involve removal of infected tonsils and adenoids, removal of polyps, straightening the nasal septum, or treating the sinuses. As the fluid thickens and becomes organized, permanent damage is bound to result.

The third type of conductive deafness is infectious. It develops following an acute cold or sore throat, or following swimming or diving. It is more common in young children whose eustachian tubes are unfortunately large in diameter and short. It is often the result of too forceful and incorrect blowing of the nose. Bacteria reach the middle ear by way of the eustachian tube. Pus accumulates in the middle ear and presses against the drum. The drum may rupture spontaneously, but the best drainage results from skillful incision through the drum. The drum usually heals rapidly and if a hearing loss results, it does so not as a result of the

scar in the drum, but rather from the much more serious scars developed in the middle ear because of long neglected drainage.

This brings us to the last type of conductive deafness called, "otosclerosis". It usually occurs in young adults. Heredity and derangements of the endocrine glands seem to play an important role in its occurrence. In this condition there is an excessive deposit of calcium closing the oval window, hampering the movements of the stapes until finally the footplate becomes fixed. A recently perfected type of operation has been devised detouring sound vibrations around this roadblock.

Nerve deafness in the small child with no history of ear infection may be caused by a congenital absence of some of the essential parts of the ear, or injury to the nerve during birth, or possibly to congenital syphilis with involvement of the auditory tract. The otologist is helpless in the face of such conditions.

The adult past forty years, who has a tendency toward high blood pressure, may develop another type of nerve deafness. He may have a hemorrhage within the confines of the inner ear. A salt-free diet and careful supervision by the otologist will often relieve the residual giddiness and sometimes restore hearing partially.

There is a type of nerve deafness caused by a focus of infection. It is thought to be caused by the swelling of the tiny hair cells in the cochlea and is often relieved by removal of infected tonsils or teeth.

There is a toxic form of nerve deafness caused by drug or metal poisoning. Still another type is caused by acquired syphilis. Likewise mechanical pressure on the auditory nerve caused by brain tumors or skull fractures may result in deafness.

The last type of nerve deafness to be considered is caused by senility as a result of poor nourishment supplied by sclerotic, pipestem arteries and by poor cerebral interpretation of weak impulses from the inner ear.

Many patients exhibit combinations of these types of hearing losses. All these combinations must be carefully evaluated by the otologist in arriving at a diagnosis of the type and degree of deafness and in prophesying the prognosis. Journal of Exceptional Children, October, 1941, pp. 9-16. (By Oliver B. McGillicuddy, M.D.). Abstracted by Rose J. Jirinec, M.D.

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Problems in the Adolescence of Exceptional Children.—In all ages of the world and in societies of widely differing culture, adolescents have had five main problems to solve. These are (1) ad-

justing to their own physical growth and development, (2) achieving emancipation from the family and attaining emotional independence and maturity, (3) accepting their own characteristic sex role and adjusting wholesomely to the opposite sex, (4) finding and entering upon a suitable vocation, and (5) developing a philosophy that will give meaning and purpose to life.

All adolescents in our society have more or less difficulty in solving these five major problems. When we come to the adolescent that deviates from the average either physically or mentally, his problems are often increased many fold.

Among the signs of social maturity of individuals from 18 to 25 years of age are the following characteristics: goes to distant points alone, looks after own health, goes out nights unrestricted, controls own expenditures, assumes responsibilities beyond his own personal needs, performs skilled work, engages in beneficial recreation, inspires confidence, can be relied upon in times of stress, fills positions of social trust, shares community responsibility, creates his own opportunities, and promotes general welfare. These are the goals toward which teachers of exceptional children must try to guide their pupils.

The greatest danger of all to exceptional children is overprotection. Nothing undermines emotional security and emotional independence more than the doing of too much for a child. It is a direct implication that he is not able to do things for himself, that he is not capable or competent. Unfortunately, the exceptional child has less means of struggling against such domination in the guise of overprotection than normal children have.

At the opposite extreme of the exceptional child that is coddled and overprotected is the one that is rejected by his parents because of his disability or through lack of understanding. Many parents are disappointed in the child that is crippled, deaf, blind, or subnormal. Teachers, too, often have the attitude that handicapped children are scarcely worth the expenditure of their time and attention, and this is subtly communicated to pupils.

Aside from the effects of the overprotection or rejection by parents and teachers on the adolescent's development maturity, there is a further danger. Circumstances surrounding exceptional children make their growth in independence, altruism, and responsibility difficult.

There are three main steps which should be taken to help the exceptional adolescent attain emotional maturity. The first step is to establish a sound attitude toward emotional growth by use of

every means of parent education known. The second step is to make sure that the teacher of exceptional adolescents has a clear conception of the goals of emotional maturity and both the desire and skill to promote this development. The third step is the helping of the exceptional adolescent to an intelligent facing of his own assets and liabilities. He should come to know himself, and be himself. If the attitudes of the parents, teachers, and general public are sound, the child will have little difficulty in finding personal worth, and self-respect, and maturity. By Samuel R. Laycock, Ph.D. Journal of Exceptional Children, March, 1942. Abstracted by Rose J. Jirinec, M.D. Pp. 171-177.

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"Protection of the Crippled Child from Avoidable Strain in School",—The author, Marjorie P. Sheldon, M.A., is instructor of orthopedic physical education at the Branch Brook School, Newark, New Jersey. The following remarks assume that the child in question is of average mentality; that he receives regular attention from an orthopedic physician or clinic; that he is a pupil in a public school; and that he has passed the acute stages of his illness or orthopedic injury.

The author lists three basic *strains* to which the crippled pupil may, because of his handicap, be liable: The first two are referable to physical situations, the last to his social-emotional development.

Mechanical limitation necessitates extra effort to perform bodily movements. It does not, however, make all motion distasteful or painful. If the school program is kept within the child's physical limits, it is possible for him not to be quite discouraged by this physical aspect of his handicap. The second type of strain is the *systemic health drain.* This is particularly significant in orthopedic disease, which is liable to bring systemic bacteria, such as bone osteomyelitis, tubercular joints, arthritis. It is also pertinent in certain birth injuries which interfere with smooth breathing control and therefore aggravates any inspiratory infection. Failure to gain weight steadily or the actual loss of weight are important criteria.

Both of these physical strains may be reduced or prevented through regular inspection by the doctor, braces and other apparatus to improve support and increase comfort. Correctly fitting crutches and adjusted desk and seat are examples in furthering efficient mechanical protection. Moreover, the school routine should be shaped in such ways as to protect him from all possible strain. Extra rest, a generous lunch, extra milk, cod liver oil, a play period

designed to give satisfaction and pleasure, without injury, may do much to further resistance to infection and to prevent breakdown.

The third strain pertains to *social-emotional reaction* to the handicap. This oft times is the most significant factor. He has to learn to accept and react objectively rather than personally and emotionally to his disability. For example he has to digest emotionally many unfortunate and all too common attitudes and reactions toward the *crippled child*, such as the tendency to be more impressed by his handicap rather than by the child back of it; inability to do the things other children of his age do readily; the usual stresses of growing up and school experience; conflict of difference through advertisement of his handicap, relative to movement or unusual appearance; the mistaken notion that he cannot be normal in other ways because he is not normal physically. In spite of this unwholesome attitude toward the crippled child, by and large they tend to be normal, and many of them maintain surprisingly stable personalities in spite of their difficulties.

It is important that we do not fall into the common fault of over-protection, preventing him from learning to live with others, and driving him deeper, in an emotional sense, into his disability. The crippled child like every child needs to be assisted toward acquiring the independence he needs in living with others. Adequate opportunities must be provided for expressing and accepting himself without prejudice because of his handicap.

It is important that activities and interests be shaped to the child's needs, ability, and special type of ability and interests, so that he may feel that he is worthwhile physically, mentally, socially, and academically, because he experiences some degree of achievement by dint of his own efforts. Companionship and fair competition of other children similarly limited can be of value. The school recreational period can also be a strong socializing factor. Every means should be capitalized toward desensitizing the negative aspects of social difference. This can be done best by recognizing his relative strengths and developing them to overcome his weaknesses or liabilities. He thus comes to realize there is more to him than his handicap, even though the latter must be emotionally accepted and allowed for and properly managed. Proper understanding will cause unwholesome aspects of inferiority, as well as feelings of being ashamed to disappear. One of the best ways of eradicating negative emotional and attitudinal aspects is to discuss his problems freely with a sympahetic and understanding parent or parent-substitute.

Real emotional release to the child who has been bottled up with his handicap and family during pre-school years, may be brought about by *sharing* his disability with others. He must be made to feel he will not be criticized for talking freely about any problems which may confront him. Frequently he can be led to talk quite spontaneously to his teacher, whereas in the presence of his parents he may be unwholesomely repressed. Thus the importance of teacher-pupil relationship and room atmosphere, as well as a well-planned academic program is evident. This latter must always respect the factor that the child be not asked to perform more physical skills than at a given stage of his training, he is able to give and he should achieve with a certain degree of success with reasonable satisfaction.

Careful attention to progression that includes emotional and social status, as well as physical strengths must be observed. While protecting the child from fright and nervousness at all times, the instructor must also see to it that he procures and develops in the child a physical independence with a minimum of emotional strain. Emotional and mental security are given a purchase for confidence and aggresivity toward the acquisition of new skills. If children are to be encouraged in developing mental honesty, those who are more or less responsible for their welfare must also be truthful with them. While never relinquishing tactfulness, the child need not be given more information than he wants or needs at any particular time. Always emphasize the hopeful aspects of his condition.

Plans should be made in advance for the management of various aspects of any given situation. For example, a simple explanation before an operation may give a feeling of security, because of the rationality of the procedure and thus avoid anxiety or panic. He should be led to understand just what the operation will do for him in the line of repair or improvement. It is important that more be not promised than can reasonably be expected.

Every physical possibility that the child possesses should be capitalized in improving the strength and skill useful to him in every-day living, to the end that he may eventually realize social, emotional, and economic security. Marjorie P. Sheldon, Journal of Exceptional Children, November, 1941, page 50. Abstracted by Frederick L. Patry, M.D.

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The Science of Nutrition,—The world will always have to be patient with those who claim, and sympathetic with those who are required, to speak the truth, the whole truth and nothing but the

truth, for as Anne Lindbergh observed, "To write or to speak is almost inevitably to lie a little." Our words fit our ideas so loosely. Even the mathematically efficient precision of modern gunnery must be concluded with the phraseology that the marksmanship was "poor" or "good", and in the case of the shell that struck the magazine of the battleship *Hood* the marksmanship was rightly termed "unfortunate". What would William of Orange say to the American columnists who keep repeating that England has not been invaded since the day of William the Conqueror? They have said it so often that many people now believe it to be a fact. Our minds move in tiny circles or leap great gaps of time or space with equal facility. Somehow, we rely on others to keep us from going too far astray.

On whom are we relying to keep our nutritional appraisals and advices within bounds? It is obvious that our nutritional status may not be at an optimum because nobody knows what the optimum should be. It may even be admitted that there is a serious degree of malnutrition in this country, without throwing too much fat on the fire of the vitamin vendors. The stories of office girls who become listless when they are deprived of their thiamin, however, are reminiscent of the testimonials for Lydia Pinkham's vegetables, or whatever they were. Clinically visible nutritional deficiencies now attract our attention more readily, to be sure, but they are oftener secondary to alcoholism, dementia, or advanced organic disease than to a lack of knowledge or economic resource. The gross nutritional lacks of 20 years ago have all but disappeared. What has become of the rickety baby? The adolescents of today are obviously larger and stronger than their parents are or ever were. For a nutritionist[1] to state that our food ways "are worse today than they were in 1914" seems ridiculous. Casual reading of some of his admonitions indicates that we have been going down the wrong road, or even moving backward, but when we see that they are based, among other things, on "many recent nutritional surveys including the extensive governmental study of consumer purchases conducted by the Bureau of Labor Statistics, the Bureau of Home Economics and the National Resources Committee," we begin to see the light.

The Science of Nutrition is being moved into the same apartment with Adequate Medical Care. It can pay the rent; it needs a better home and so it is being moved. But it is a large family, which can not possibly be completely housed even in spacious governmental bureaus; friends and relatives must be left behind who

will continue to work under present conditions and with present scientific standards. There is going to be some temptation for those who have acquired new surroundings and new friends to forget their former associates, to forget the standards under which they previously lived and worked. There is going to be some pressure for them to keep up with the Joneses in the new neighborhood, where it is doubtless assumed that diets can be balanced with the same facility as budgets. The House of Delegates of the American Medical Association has called at the new apartment and paid its respects in the form of a series of resolutions adopted at the Cleveland session, but the *Journal of the American Medical Association*[2] has also taken notice of the inspired character of some of the initial efforts. The medical profession may be counted on to back up any statement or program that is warranted by facts or good evidence, or even that is not too greatly exaggerated. Exaggerations, however, are seized on by publicists, who allow their stories to carry unintended implications, and this does the Science of Nutrition no good.

References:

1. Wilder, R. M., Nutrition in the United States. A program for the present emergency and the future. *Ann. Int. Med.* 14:2189-2198, 1941.
2. Editorial. National Nutrition. *J. A. M. A.* 116:2854, 1941.
Reprinted from *The New England Journal of Medicine*, The Science of Nutrition, p. 278, February 12, 1942.

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Obesity and the Child at Puberty,—Obesity is particularly a problem of puberty, says Schultz. It is often divided into two principle types: (1) obesity produced through the organism or one of its parts (endogenous), (2) obesity produced by an intake of excess food (exogenous). The latter is the most common as well as most amenable to treatment. It is associated with environmental circumstances as well as other factors such as racial, familial, and constitutional tendencies. Sex appears to play some role in obesity because there are a greater number of obese girls than boys at puberty and beyond.

Endogenous Obesity: Variation in weight balance may be caused by either or both nervous and hormonal conditions. That the latter plays a large part is the more popular belief, but those who have given the problem much consideration do not seem to agree. An example of such hormonal condition is obesity through abnormal function of the thyroid. It is principally treated through thyroid extract, but great effort is required to bring about mental and physical improvement.

A congenital absence of an organ, a tumorous growth, or a degeneration which causes the whole or partial loss of the hormone are rather easily distinguishable conditions. It is believed, for example, that fatness connected with abnormal genital growth may be caused by dysfunction of the hypophysis.

Another factor which influences obesity is possible dysfunction of the hypothalamic region. In animal experiments, injury to this region will produce obesity. Metabolic abnormality or endocrine dysfunction are often found in humans. There is a question as to whether the nerve structures in this region, when functioning normally, may perhaps control the balance of weight of the body. One type of hypothalamic dysfunction includes a tumorous condition which may possibly be eliminated through an operation. A specific dietary regime with thyroid extract often produces temporary improvement. Another hypothalamic condition may be present without a tumorous growth. Results may be obtained by diet, planned physical activity, and some endocrine treatment. States of weakness, loss of consciousness, loss of appetite, and a smaller proportion of sugar content, may exist where there is excessive obesity resulting from this dysfunction and where too rapid weight reduction is undertaken. Active treatment includes hospitalization with resultant gradual loss of weight under strict supervision.

Obesity due to injury to forebrain is most resistant to treatment and sedatives are used for over-activity.

Exogenous Obesity: An excessive intake of food over energy output with accumulation of fatty tissues is a form of exogenous obesity and is most commonly found in children at puberty. Metabolism is usually normal. Parental over-indulgence and lack of exercise as well as other physiological and psychological factors, may be contributing agents. Blood pressure and sugar tolerance are frequently raised. Treatment under proper supervision, which guards against excessive decrease in diet and expenditure of energy through exercise, is highly successful. Adequate amounts of minerals and vitamins, should be included in the diet and thyroid extract is used if metabolism is lowered. "What to Do About the Fat Child at Puberty," by F. W. Schultz, M.D., The Journal of Pediatrics, September, 1941, Volume 19, No. 3, pp. 376. Abstracted by John D. McCarthy.

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Preschool Dental Program in Indiana.—Those persons disseminating dental health education have for many years stressed the importance of early detection and correction of dental disease

A preventive program in dental health does not necessarily mean that if a child starts visiting the dentist at two and one-half years of age and returns at regular intervals thereafter the child will never experience some type of dental disease. In brief, a preventive dental program means the discovery of any abnormality in the mouth in its incipiency, and the institution of the necessary measure which will correct such an abnormality as well as reduce the possibility of its recurrence.

In order that the great amount of accumulated dental disease be reduced, and also in order that the number of dental service hours now available be more nearly adequate to meet the problem, there must of necessity be an increase in the number of preventive health programs for the preschool age group of our population.

A national survey on preschool dental programs was attempted during the last summer by the American Society of Dentistry for Children cooperating with the American Association of Public Health Dentists. A report on the national survey was given at the annual meeting of the American Dental Association; however, the findings relative to such programs in Indiana should prove most interesting to all persons active in the promotion of community health.

Several most interesting points were brought out by this survey among which the following were outstanding:

(1) The need for a greater number of community sponsored preschool dental programs;

(2) Parent education pertaining to the importance of dental health for the early age child should be increased;

(3) Dentists should be invited to participate actively in the preschool dental programs;

(4) Dentists should become interested in the preschool child and in offering dental service for this age group of our population;

(5) Preschool dental programs should be organized to effect attendance during periods set aside to provide service and to carry out follow-up steps to insure progress in obtaining correction.

By Frank S. Stafford, Assistant Chief, Bureau of Health and Physical Education, Monthly Bulletin Indiana State Board of Health, No. 10, October, 1941, p. 229. Abstracted by Rose J. Jirinec, M.D.

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Milk Borne Disease, — Feemster in a paper in the Seventh Chronological Report from the Massachusetts Department of Public Health summarizes as follows:

1. Milk-borne disease continues to decrease in Massachusetts.

Only four outbreaks traced to milk have occurred in this state within the last five years.

2. There has been a slight but progressive decrease in the per capita consumption of milk since 1926.

3. Seventy-eight communities, representing nearly 80 per cent of the population of the state, now have regulations requiring that all milk be either pasteurized or certified.

4. It is estimated that over 90 per cent of the milk consumed in the state is pasteurized.

5. There has been a further increase in the number of bacteriological examinations performed to guard the quality of milk.

American Journal of Public Health, and The Nations Health, Vol. 31, No. 11, November, 1941, p. 1173.

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REVIEWS

Superior Children Through Modern Nutrition, *By I. Newton Kugelmass, M.D.* E. P. Dutton & Co., Inc., New York, N. Y., 1942, Pp. 332. Price, $3.50.

We read and hear so much hokum regarding nutrition, "eat this, drink this, take Dr. Buncom's tablets," that it is a huge relief to read an authentic text on this subject; one written by an acknowledged authority in Pediatrics, without bias and with no trade product to sell.

This text is designed for the use of parents. The facts are simply and clearly stated in such a way as to make interesting reading.

The author starts with a brief study of nutrition itself, its evolution, the function and the utilization of foods. He then discusses the types of food; energy foods, vitamin foods, and the protective minerals.

Then follow chapters on feeding the newborn infant, breast feeding, artificial and mixed feeding, on food allergy, feeding behavior, and individualized feeding. Note is taken, too, of the factor we are likely to ignore in an effort to establish a "formula," namely, feeding in relation to body build, the lean and the fat, and feeding behavior. This last is pecularily interesting and valuable. Each of us probaly has met numerous children who are pests because they have been permitted—in some cases seemingly encouraged—

to form food attitudes that make every meal a battle.

Here is a practical, badly needed book that should go into every household where there is a baby or a young child, and once there, should be read, studied, and so far as possible, utilized in the feeding and habit formation of expanding childhood.

Charles H. Keene, M.D.

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Outwitting the Hazards. Youth Attacks the Accident Problem.
By FRANCIS L. BACON

Silver Burdett Co., New York, N. Y., 1941, *pp.* 446, *Price,* $1.80

This text, designed apparently for children of the high school age, is an excellent presentation of the hazards about us, in home, occupation, or the highway, and those incident to operation of the automobile.

The author, Superintendent, Evanston Township High School, Evanston, Illinois, is an educator of note who has spent most of his professional lifetime in intimate contact with adolescent boys and girls and is familiar with their problems.

Numerous illustrations add to the interest and attractiveness of the text and increase its value greatly.

The list of topics for report and discussions and the list of readings at the ends of chapters add greatly to the usefulness of this text. Its use as a text to be put in the hands of pupils should be encouraged.

Charles H. Keene, M.D.

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MEETINGS

The American Association for Health, Physical Education and Recreation, New Orleans, April 15-18, 1942; headquarters, Hotel Roosevelt.

The New England Public Health Institute, Providence, Rhode Island, April 21-23, 1942.

The Eastern District Society, American Association for Health, Physical Education, and Recreation, Pittsburgh, April 29-May 2; headquarters, Hotel Schenley.

National Education Association at Denver, Colorado, June 27-July 2, 1942.

American School Health Association and the American Public Health Association at St. Louis, Missouri, October 26-30 inclusive, 1942.

Tuberculosis Committee of the American School Health Association: breakfast meeting at the Convention of the National Tuberculosis Association at Philadelphia, May 8, 1942.